

Arizona CTE Career Preparation Standards Framework for CONSTRUCTION TECHNOLOGIES

This is a summary of changes made to the program framework dated April 2006. Workplace Standards 1 through 26 will be addressed separately. Other changes to the original framework are outlined below:

Standard 27.A has been renamed **Standard A**. The measurement criteria listed under the standard have been renumbered (1-4) with no additions and deletions.

Standard 28.A has been renamed **Standard B**. The measurement criteria listed under the standard have been renumbered (1-7).

Measurement criteria # 6 and #7 have been added to Standard B:

6. Construct concrete formwork.

7. Estimate the material needed for concrete/masonry work.

Standard 29.A has been renamed **Standard C**. The measurement criteria listed under the standard have been renumbered (1-8) with no additions and deletions.

Standard 30.A has been renamed **Standard D**. The measurement criteria listed under the standard have been renumbered (1-6) with no additions and deletions.

Standard 31.A has been renamed **Standard E**. The measurement criteria listed under the standard have been renumbered (1-6) with no additions and deletions.

Standard 32.A has been renamed **Standard F**. The measurement criteria listed under the standard have been renumbered (1-3) with no additions and deletions.

Standard 33.A has been renamed **Standard G**. The measurement criteria listed under the standard have been renumbered (1-4).

The words **and/or** has been added to measurement criteria 33.1a, and the words **Demonstrate the installation of** has been deleted and replaced with **Install**.

Measurement criteria # 5 has been added to Standard G:

5. Install exterior stucco finish.

Standard 34.A has been renamed **Standard H**. The measurement criteria listed under the standard have been renumbered (1-3) with no additions and deletions.

Standard 35.A has been renamed **Standard I**. The measurement criteria listed under the standard have been renumbered (1-5) with no additions and deletions.

Standard 36.A has been renamed **Standard J**. The measurement criteria listed under the standard have been renumbered (1-5) with no additions and deletions.

Standard 37.A has been renamed **Standard K**. The measurement criteria listed under the standard have been renumbered (1-6) with no additions and deletions.

Standard 38.A has been renamed **Standard L**. The measurement criteria listed under the standard have been renumbered (1-5).

38.1a to 2

38.2a to 3

38.3a to 4

Measurement criteria # 1 and # 5 have been added to Standard L.:

1. Identify type and use of drywall.

5. Demonstrate technique for paint application.

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STANDARD A -- LAY OUT BUILDING LINES	
1	Demonstrate the use and care of precision measuring instruments.
2	Establish building lines.
3	Use a builder's level or transit and differential leveling procedures to determine site and building elevations.
4	Record site layout data and information in field notes using accepted practices.
STANDARD B -- PERFORM CONCRETE/MASONRY WORK	
1	Prepare and pour a footing.
2	Construct a foundation wall or pier.
3	Lay brick/block to specification.
4	Cut brick and block accurately.
5	Demonstrate the process of depositing, spreading, consolidating, and striking off concrete in a form.
6	Construct concrete formwork.
7	Estimate the material needed for concrete/masonry work.
STANDARD C -- LAY OUT AND INSTALL FLOOR SYSTEMS	
1	Install sill plate(s).
2	Set posts.
3	Construct or place girders/beams.
4	Match selected fasteners used in floor framing to their correct uses.

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5	Estimate the amount of material needed to frame a floor assembly.
6	Lay out and construct floor assembly.
7	Install joists for a cantilever floor.
8	Install a subfloor using butt-joint plywood/OSB panels.

STANDARD D --DEMONSTRATE WALL AND CEILING FRAMING

1	Lay out wall lines including plates, corner posts, door and window openings, partition Ts, bracing and plan for installation of fire stops.
2	Assemble wood stud walls.
3	Assemble metal stud walls.
4	Lay out, assemble, erect, and brace exterior walls for a frame building.
5	Cut and install ceiling joists on a wood frame building.
6	Estimate the materials required to frame walls and ceilings.

STANDARD E -- FRAME AND FINISH A ROOF

1	Construct conventional roof and/or set truss systems.
2	Install roof sheathing and coverings.
3	Frame a roof opening.
4	Demonstrate the techniques for installing a variety of types of roofing materials.
5	Estimate the materials used in framing and sheathing a roof.

STANDARD F -- IDENTIFY THERMAL AND MOISTURE PROTECTION

1	Install insulation material.
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These technical knowledge and skill standards were validated by a Skill Standards Validation Committee on October 26, 2007, and used in the adaptation, adoption, and development of test items for pilot testing in Spring 2008.

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2	Install vapor barrier.
3	Identify types and use of thermal insulation.
STANDARD G -- APPLY EXTERIOR FINISHES	
1	Identify and/or install frieze boards or soffit.
2	Install exterior moldings and trim.
3	Install various types of siding.
4	Apply correct installation to eliminate water intrusion.
5	Install exterior stucco finish.
STANDARD H -- INSTALL DOORS AND WINDOWS	
1	Install door systems.
2	Install door hardware.
3	Install window systems.
STANDARD I -- INSTALL INTERIOR TRIM AND STAIRS	
1	Install baseboards and casings.
2	Lay out and cut stringers.
3	Determine the number and sizes of risers and treads required for a stairway.
4	Build a small stair unit.
5	Lay out a skirt board.
STANDARD J -- ASSEMBLE PIPING, WASTE AND VENT DISTRIBUTION SYSTEMS	
1	Assemble a soil, waste and vent system.

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2	Assemble a water distribution system.
3	Install plumbing fixtures or equipment.
4	Demonstrate the ability to properly measure, cut, and join plastic and copper piping
5	Identify the major components of a drainage system; describe their functions and how they malfunction.
STANDARD K-- INSTALL ELECTRICAL COMPONENT/SYSTEM(S)	
1	Identify electrical service entrance requirements.
2	Rough in switch boxes and outlet boxes.
3	Rough in feeder and circuit.
4	Install low voltage systems.
5	Trim out electrical devices and appliances.
6	Install lighting fixture(s) and ceiling fans.
STANDARD L -- INSTALL INTERIOR WALL AND CEILING FINISH	
1	Identify type and use of drywall.
2	Demonstrate the proper techniques for cutting drywall.
3	Fasten drywall to ceiling and walls.
4	Apply mud, use tape appropriately and install corner bead.
5	Demonstrate technique for paint application.